

BTEC Assignment Brief

Qualification	Pearson BTEC International Level 3 Extended Diploma in Horticulture
Unit number and title	Unit 46: Managing soil water
Learning aims	B: Maintain irrigation and drainage systems for land-based industries C: Understand the legal requirements applicable to irrigation and drainage for land-based industries
Assignment title	Irrigation and Drainage
Assessor	
Issue date	
Hand in deadline	

Vocational Scenario or Context	Irrigation and drainage of the land is vital to productivity and successful land-based operations. You are tasked with carrying out practical routine activities on irrigation and drainage systems to ensure these are working effectively and the soil water is maintained at suitable levels. You are working with a team of agricultural engineers who do this routinely but need some extra assistance. They have asked you to report back on your practical work so they can assess your knowledge and understanding.
Task 1	Practical Activities logbook. Learners are required to undertake the assessing and maintenance of irrigation and drainage systems in a horticultural and agricultural setting. Learners must practically complete and record in a suitable practical log book, with photographic evidence the following tasks; Irrigation • Inspection and routine maintenance of automatic systems and mobile systems • Repair or replace a nozzle. • Track down faults in the system Drainage • Assess and carryout routine maintenance surface drainage and sub-surface drainage • Manage and install pipe drainage systems to achieve desired flow rates Following on from your practical activities you should write a short evaluative report of your activities and findings, ensuring you include: • Current legislation covering irrigation and drainage • Rules for water abstraction and drainage activities • Annual maintenance considerations of drainage and irrigation systems
Checklist of evidence required	A practical activities logbook, observation records, photographic evidence and a short-written report.
Criteria covered by this task:	
Unit/Criteria reference	To achieve the criteria you must show that you are able to:
BC.D2	Evaluate irrigation and drainage systems used in horticulture or agriculture and the national legislative requirements.
C.M3	Explain the national legislative requirements for irrigation and drainage

	in horticulture and agriculture.
B.M2	Assess and maintain common irrigation and drainage systems used in horticulture or agriculture.
C.P5	Outline the national legislative requirements for irrigation and drainage in horticulture and agriculture.
B.P4	Demonstrate maintenance of irrigation and drainage systems used in horticulture or agriculture.
B.P3	Identify common irrigation and drainage systems used in horticulture or agriculture.

Sources of information to support you with this Assignment	Books
	Biswas, R.K. (2015). <i>Irrigation and Agricultural Drainage Engineering</i> . Unknown: NIPA.
	Blum, W. Schad, N. (2018). <i>Essentials of Soil Science: Soil formation, functions, use and classification (World Reference Base, WRB)</i> . Stuttgart: Borntraeger Gebrueder.
	Waller, P. (2016). <i>Irrigation and Drainage Engineering</i> . New York: Springer.
	Campo, A. (2017). <i>Irrigation and Agricultural Drainage Engineering</i> . Wilmington: Scitus Academics LLC.
	Journals/Magazines
	Applied and Environmental Soil Science Journal
	International Commission on the Irrigation and Drainage (ICID) Journal
	Websites
	• sare.org • vaderstad.com